UNIT WEIGHT MEASURE VERIFICATION PROCEDURE #46

Revised 4/25/2002

Equipment Checked: **UNIT WEIGHT MEASURE**
(AASHTO T 121 ASTM C 138, & AASHTO T 19 ASTM C 29)

Purpose:

This method provides instructions for checking the dimensions of the unit weight measure and rod.

Inspection Equipment Required:

1. Feeler gauge 0.01" Thick
2. 15" straight edge
3. Calipers readable to 0.001"
4. Tape measure

Tolerance:

The equipment shall meet the tolerances listed in AASHTO T 121 & AASHTO T 19

Procedure:

1. Record capacity of measure.
2. Measure and record inner diameter.
3. Measure and record inside height.
4. Measure the outside height. Record the difference between the outside height and the inside height as the thickness of the bottom of the measure.
5. Place glass plate on top of measure and check for gaps greater than 0.01" by attempting to insert feeler gauge between glass plate and top of rim.
6. Use the caliper to determine the thickness of the top 1" of the rim.
7. Calibrate the measure by following the procedure given in Section 8, of AASHTO T 19.
8. Record the volume and calibration date on the outside of the measure.
9. Record the length and diameter of the rod.

EQUIPMENT CALIBRATION RECORD

Calibration Procedure No. 46 Unit Weight Measure (AASHTO T 19 & T 121)

Date:	**Calibrated by:**
Previous Calibration Date:	**Next Due:**
Frequency: 12 months	
Action Recommended: Repair _____ Replace _____ None _____ Other _____	

Calibration Equipment	Serial Number
Calipers, readable to 0.001"	
Glass plate to cover measure	
Feeler gage 0.01"	
Tape measure	

Capacity of measure	
Inner diameter	
Inside height	
Rim smooth and plane?	
Thickness of bottom	
Thickness of rim	
Length and diameter of rod	

Calibration of Measure Using Water at a Known Temperature

Size of measure	**(A)** Weight of empty measure and glass plate.	**(B)** Weight of measure filled with water, and glass plate.	**(C)** Weight of water to fill measure.	Volume in cubic feet	Temp. of water
1/10					
1/4					
1/3					
1/2					
1					

MASS OF WATER / (UNIT WT. OF WATER) X (453.6 g/lb) = CU. FT.

Tamping rod 16 mm diameter ? _____ 24" long? _____